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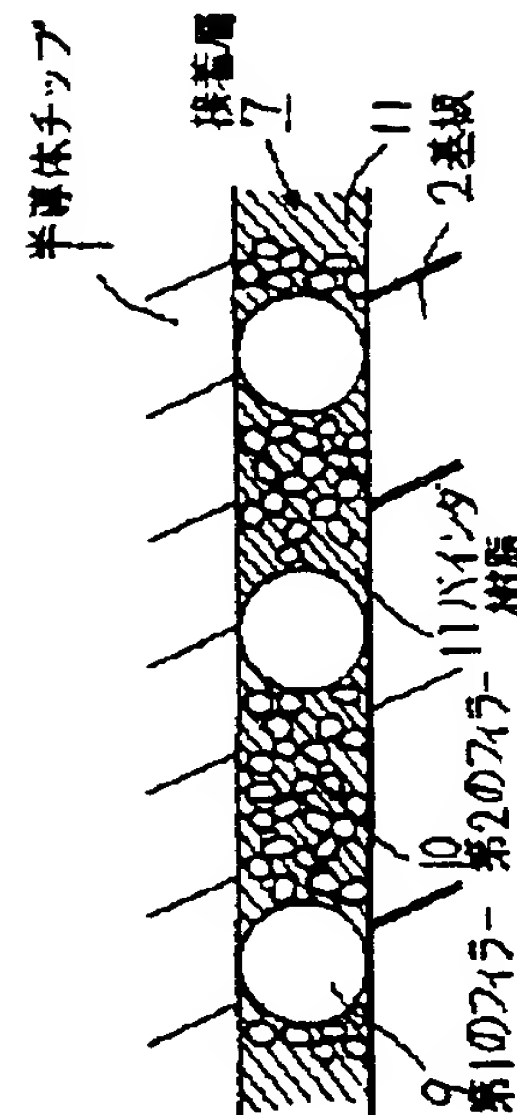
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TITLE : PASTE FOR ADHESION USE



ABSTRACT : PURPOSE: To keep constant the film thickness of an adhesion layer by a method wherein a binder resin and a solvent are added to first fillers, which are spherical insulators, have a particle diameter of a specified value and are made uniform in size, and a second filler, which is insulator powder having a superior heat conductivity and has a particle diameter smaller than that of the first fillers, and the fillers, the binder resin and the solvent are kneaded.

CONSTITUTION: An adhesion layer 7 between a substrate 2 and a semiconductor chip 1, which is installed on this substrate 1, is constituted of first fillers 9 to determine the thickness of the layer 7, a second filler 10 to dissipate heat generated in the chip 1 and a binder resin 11 to work as a bonding agent. The fillers 9 are formed of an insulator, which is spherical and has a constant particle diameter, and is limited to fillers of a particle diameter in a range of 50 to 30 μ m so as to be able to obtain a stable adhesive strength. Glass and heat-resistant plastic are used for the fillers 9. The filler 10 is insulating material powder having a superior heat conductivity, the powder overlaps each other and the filler 10 is limited to a filler of a particle diameter of 2 to 5 μ m. An aluminum nitride (AlN), boron nitride (BN), diamond powder or the like is used for the filler 10. As the binder resin, a heat-resistant resin, such as an epoxy resin, a polyimide resin or the like, is used.

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